

What is claimed is:

I claim:

1. A prodrug for use in the treatment of physiological conditions comprising a carrier moiety selected from the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl, wherein the carrier moiety is chemically linked to a therapeutic polypeptide of the general formula aa_n , where aa is an amino acid or a chemical or structural variation thereof, where n is an integer from 2 to 10, and wherein the polypeptide is poorly absorbed orally.
2. The prodrug of claim 1, wherein n is an integer from 3 to 6.
3. The prodrug of claim 1, wherein n is 5.
4. The prodrug of claim 1, wherein the polypeptide is Tyr-Gly-Gly-Phe-Met.
5. The prodrug of claim 1, wherein the prodrug further comprises a non-therapeutic linker species linking the polypeptide to the carrier species.
6. The prodrug of claim 5, wherein the linker species is an amino acid.
7. A pharmaceutical composition comprising a carrier moiety selected from the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl chemically linked to a

therapeutic polypeptide of the general formula aa_n , where aa is an amino acid or

- 5 a chemical or structural variation thereof, where n is an integer from 2 to 10,
wherein the polypeptide is poorly absorbed orally, and a pharmaceutically
effective adjuvant species.

8. A method for enhancing the oral availability of therapeutic
polypeptides of the general formula aa_n , where aa is an amino acid or a
chemical or structural variation thereof, where n is an integer from 2 to 10, and
wherein the polypeptide is poorly absorbed orally, wherein the method comprises

- 5 the step of chemically linking the polypeptide to a carrier moiety selected from
the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-
methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl to form a prodrug.

9. The method of claim 8, wherein the polypeptide is chemically
linked to the carrier moiety through a non-therapeutic linker species.

10. The method of claim 9, wherein the linker species is an
amino acid.

11. A method for the treatment of a physiological condition
through the oral administration of a therapeutically effective species comprising
the steps of:

- a.) chemically linking a therapeutic polypeptide of the
5 general formula aa_n , where aa is an amino acid or a chemical or
structural variation thereof, where n is an integer from 2 to 10, and
wherein the polypeptide is poorly absorbed orally, to a carrier
moiety selected from the group comprising cinnamoyl, benzoyl,

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Annex.

phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5
10 trimethoxycinnamoyl to form a prodrug; and

b.) orally administering the prodrug to a patient exhibiting
the physiological condition.

12. The method of claim 11, wherein the polypeptide is
chemically linked to the carrier moiety through a non-therapeutic linker species.

13. The method of claim 12, wherein the linker species is an
amino acid.

14. A method for the controlled release administration of a
therapeutically effective polypeptide of the general formula aa_n , where aa is an
amino acid or a chemical or structural variation thereof, where n is an integer
from 2 to 10, and wherein the polypeptide is poorly absorbed orally, comprising
5 the steps of:

a.) chemically linking the polypeptide to a carrier moiety
selected from the group comprising cinnamoyl, benzoyl,
phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-
trimethoxycinnamoyl to form a prodrug; and

10 b.) orally administering the prodrug to a patient.

15. The method of claim 14, wherein the polypeptide is
chemically linked to the carrier moiety through a non-therapeutic linker species.

16. The method of claim 15, wherein the linker species is an
amino acid.

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